



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,213	12/05/2003	Jitendra Modi	C-512 CIP	2474

7590

07/14/2006

Sidney Persley, Esquire
Sun Chemical Corporation
222 Bridge Plaza South
Fort Lee, NJ 07024

EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,213

Applicant(s)

MODI ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/23/04 & 5/26/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-32 and 35-38 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20, 22-23, and 32-35 of U.S. Patent No. 6,841,590 (Modi et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Prior to setting forth the rejection, it is noted that the present application is a continuation-in-part of Modi et al. and thus, there is significant overlap between the present claims and the claims of Modi et al.

Modi et al. disclose solvent-free flexographic printing ink consisting essentially of pigment, thermoplastic binder selected from the group consisting of ethylene copolymer including ethylene-acrylic acid or ethylene-vinyl acetate, hydrocarbon resin, and combinations thereof, wax selected from the group consisting of highly branched hydrocarbon wax, polyethylene homopolymer wax, oxidized polyethylene wax, animal wax, vegetable wax, and combinations thereof, solid linear alcohol, dispersing agent, and solid plasticizer wherein the ink has melting point of about 75 °C or greater and when heated to temperature between about 90 °C and about 135 °C form a molten ink which has viscosity between about 100 cps and about 12000 cps. There is also disclosed method for preparing the flexographic printing ink.

The differences between Modi et al. and the present claims are (a) Modi et al. is drawn to solvent-free flexographic printing ink while the present claims are drawn to solvent-free coating

Art Unit: 1714

composition (claim 1) or hot melt coating composition (claim 31), (b) amounts of binder, wax, and plasticizer, and (c) Modi et al. utilize dispersing agent that is not required in the present claims.

With respect to difference (a), it is clear that the disclosure of solvent-free flexographic printing ink in Modi et al. is a specific type of solvent-free coating or hot melt coating as presently claimed. That is, it would have been within the skill level of ordinary skill in the art to recognize that the broad disclosure of solvent-free coating composition or hot melt coating composition in the present claims would encompass the specific disclosure of solvent-free flexographic printing ink in Modi et al.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art that the solvent-free flexographic printing ink in Modi et al. is a specific type of solvent-free coating composition or hot melt coating composition as presently claimed, and thus, one of ordinary skill in the art would have arrived at the present invention from Modi et al.

With respect to difference (b), Modi et al. is silent with respect to the amounts of binder, wax, and plasticizer utilized.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to example 1 of Modi et al. (col.8, line 30-col.9, line 25) that discloses ink comprising 8% solid linear alcohol, 2.5% plasticizer, 50% ethylene-acrylic acid (binder), and 25% animal wax or highly branched hydrocarbon wax in order to produce ink with very good gloss or Table I, ink BLU3 which comprises 9.6% linear alcohol, 3% plasticizer, 25% ethylene-vinyl acetate (binder), and 45% polyethylene wax to produce ink with good gloss and color strength.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use plasticizer, binder, and wax in amounts, including those presently claimed, in the composition of Modi et al. in order to produce composition with good gloss, and thereby arrive at the present invention from Modi et al.

With respect to difference (c), the present claims are silent with respect to dispersing agent while Modi et al. requires the use of dispersing agent. However, in light of the open language of the present claims, i.e. “comprising”, it is clear that the present claims are open to the inclusion of additional ingredients including dispersing agent, and thus, one of ordinary skill in the art would have arrived at the present invention from Modi et al.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 6, 17, 20, 25-26, and 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al. (U.S. 5,185,035).

Brown et al. disclose hot melt ink possessing viscosity of 5-100 cP at 100-130 °C wherein the ink comprises pigment, 2-50% wax that includes mixtures of polyethylene wax and solid linear alcohol, and binder that is hydrocarbon resin. From Table III, it is clear that the binder is used in amount of, for instance, 48.5% (col.1, lines 8-10, col.2, lines 45-46, 52, and 56-58, col.3, lines 50-52, and col.6, lines 20-42). Although there is no disclosure of the melting point of the hot melt ink, given that Brown et al. disclose the use of ink comprising same types and amounts of ingredients as presently claimed that has viscosity, i.e. 100 cP at 100-130 °C, as presently claimed, it is clear that the ink would inherently possess melting point as presently claimed.

While there is no disclosure that the hot melt ink is a flexographic printing coating composition as required in claim 32, applicants attention is drawn to MPEP 2111.02 which states that “if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, then the preamble is not considered a limitation and is of no significance to claim construction”. Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. flexographic printing coating composition, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art composition and further that the prior art composition which is identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

In light of the above, it is clear that Brown et al. anticipate the present claims.

5. Claims 1-2, 6-9, 12, 17, 20, and 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Suematsu et al. (U.S. 5,597,641).

Suematsu et al. disclose solvent-free coating composition, i.e. hot meltable ink, that possesses viscosity of 20-200 cP at 90 °C and melting point of 60-85 °C wherein the coating comprises pigment, wax that includes combinations of beeswax, i.e. animal wax, polyethylene wax, and stearyl alcohol i.e. solid linear alcohol, and heat-meltable resin, i.e. binder, such as ethylene-vinyl acetate or ethylene-(meth)acrylic acid (col.6, lines 24-28, 31, 35-36, 39-40, 43-44, 46-47, and 66-67 and col.7, lines 40-42 and 52-53).

While there is no disclosure that the hot melt ink is a flexographic printing coating composition required in claim 32, applicants attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction".

Art Unit: 1714

Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. flexographic printing coating composition, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art composition and further that the prior art composition which is identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

In light of the above, it is clear that Suematsu et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1714

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (U.S. 5,185,035) or Suematsu et al. (U.S. 5,597,641) either of which in view of Ouchi et al. (U.S. 6,106,602).

The disclosures with respect to Brown et al. and Suematsu et al. in paragraphs 4 and 5 above are incorporated here by reference.

The difference between Brown et al. or Suematsu et al. and the present claimed invention is the requirement in the claims of specific solid linear alcohol.

Ouchi et al., which is drawn to hot melt ink, disclose the use of alcoholic wax possessing hydroxyl number of 20-150, viscosity of 5-30 mPas at 100-150 °C, molecular weight of 200-1500, and melting point of 50-120 °C in order to produce ink with good stability (col.2, lines 3-19 and 53-56 and col.3, line 59-col.4, line 31).

In light of the motivation for using solid linear alcohol disclosed by Ouchi et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such solid linear alcohol in the ink of Brown et al. or Suematsu et al. in order to produce ink with high optical transmission, hue, and chroma as well as good storage stability, and thereby arrive at the claimed invention.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suematsu et al. (U.S. 5,597,641) in view of Elwakil (U.S. 5,574,078) and Herten et al. (U.S. 4,853,427).

The disclosure with respect to Suematsu et al. in paragraph 5 above is incorporated here by reference.

The difference between Suematsu et al. and the present claimed invention is the requirement in the claims of specific type of ethylene-acrylic acid copolymer.

Elwakil, which is drawn to hot melt ink, disclose the use of ethylene-acrylic acid copolymer known under the tradename AC 580 in order to enhance gloss (col.14, lines 54-63). It is well known, as found in Herten et al., that AC 580 is ethylene-acrylic acid copolymer that possesses acid number of 80 and viscosity of 650 cP at 140 C (col.7, lines 11-17).

In light of the motivation for using ethylene-acrylic acid copolymer disclosed by Elwakil as described above, it therefore would have been obvious to one of ordinary skill in the art to use such copolymer in the ink of Suematsu et al. in order to produce ink with enhanced gloss, and thereby arrive at the claimed invention.

Art Unit: 1714

10. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suematsu et al. (U.S. 5,597,641) in view of Kruse (U.S. 5,112,398).

The disclosure with respect to Suematsu et al. in paragraph 5 above is incorporated here by reference.

The difference between Suematsu et al. and the present claimed invention is the requirement in the claims of specific type of ethylene-vinyl acetate copolymer comprising 40% vinyl acetate.

Kruse, which is drawn to ink composition, disclose the use of ethylene-vinyl acetate comprising 40% vinyl acetate given that such copolymer adheres well to substrate (col.4, lines 48-52 and 63-66). Given that Kruse discloses ethylene-vinyl acetate comprising same amounts of ethylene and vinyl acetate as presently claimed, it is clear that such copolymer would also intrinsically possess melt index as presently claimed.

In light of the motivation for using specific type of ethylene-vinyl acetate disclosed by Kruse as described above, it therefore would have been obvious to one of ordinary skill in the art to use such ethylene-vinyl acetate in the ink of Suematsu et al. in order to produce ink that adheres well to substrate, and thereby arrive at the claimed invention.

11. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (U.S. 5,185,035) or Suematsu et al. (U.S. 5,597,641) either of which in view of Oliver et al. (U.S. 5,593,486).

The disclosures with respect to Brown et al. and Suematsu et al. in paragraphs 4 and 5 above are incorporated here by reference.

The difference between Brown et al. or Suematsu et al. and the present claimed invention is the requirement in the claims of highly branched hydrocarbon wax.

Oliver et al., which is drawn to hot melt ink, disclose the use of highly branched hydrocarbon wax possessing number average molecular weight of 520 in order to produce ink with high optical transmission, hue, and chroma as well as to produce ink able to survive severe storage conditions without melting or offset (col.8, lines 25-27, col.8, line 67-col.9, line 2, and col.10, lines 43-47). Although there is no explicit disclosure regarding the softening point or viscosity of the highly branched hydrocarbon wax, given that Oliver et al. disclose the use of wax known under the tradename Vybar 253 which is identical to the highly branched hydrocarbon wax used in the present invention, it is clear that such wax would intrinsically possess softening point and viscosity as presently claimed.

In light of the motivation for using highly branched hydrocarbon wax disclosed by Oliver et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such wax in the ink of Brown et al. or Suematsu et al. in order to produce ink with high optical transmission, hue, and chroma as well as good storage stability, and thereby arrive at the claimed invention.

12. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (U.S. 5,185,035) or Suematsu et al. (U.S. 5,597,641) either of which in view of Oliver et al. (U.S. 5,593,486) and *Ethylene Homopolymers- Polywax*.

The disclosures with respect to Brown et al. and Suematsu et al. in paragraphs 4 and 5 above are incorporated here by reference.

The difference between Brown et al. or Suematsu et al. and the present claimed invention is the requirement in the claims of specific type of polyethylene wax.

Oliver et al., which is drawn to hot melt ink, disclose the use of polyethylene wax possessing number average molecular weight of 1000 in order to produce ink with high optical transmission, hue, and chroma as well as to produce ink able survive severe storage conditions without melting or offset (col.8, lines 25-27, col.9, lines 34-48, and col.10, lines 43-47). Although there is no explicit disclosure regarding the molecular weight distribution or melting point of the wax, Oliver et al. disclose the use of wax known under the tradename Polywax, which is well known, as found in *Ethylene Homopolymers- Polywax* (retrieved from the Internet: <URL: [www.bakerhughes.com/bakerpetrolite /polymers/ethylene_homopolymers](http://www.bakerhughes.com/bakerpetrolite/polymers/ethylene_homopolymers)>), as possessing molecular weight distribution of approximately 1.1 and melting point of 80-132 °C.

In light of the motivation for using specific polyethylene wax disclosed by Oliver et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such wax in the ink of Brown et al. or Suematsu et al. in order to produce ink with high optical transmission, hue, and chroma as well as good storage stability, and thereby arrive at the claimed invention.

13. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suematsu et al. (U.S. 5,597,641) in view of Sawada (U.S. 5,560,765).

The disclosure with respect to Suematsu et al. in paragraph 5 above is incorporated here by reference.

The difference between Suematsu et al. and the present claimed invention is the requirement in the claims of specific type of specific type of wax.

Sawada, which is drawn to hot melt ink, disclose the use of spermaceti wax in order to control the thermal characteristics and viscosity of the ink (col.2, lines 38-42 and col.3, line 30).

In light of the motivation for using spermaceti wax disclosed by Sawada as described above, it therefore would have been obvious to one of ordinary skill in the art to use such wax in Suematsu et al. in order to control the thermal characteristics and viscosity of the ink, and thereby arrive at the claimed invention.

14. Claims 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (U.S. 5,185,035) or Suematsu et al. (U.S. 5,597,641) either of which in view of Jaeger et al. (U.S. 4,889,560).

The disclosures with respect to Brown et al. and Suematsu et al. in paragraphs 4 and 5 above are incorporated here by reference.

The difference between Brown et al. or Suematsu et al. and the present claimed invention is the requirement in the claims of plasticizer.

Jaeger et al., which is drawn to hot melt ink, disclose the use of up to 25% plasticizer such as dicyclohexyl phthalate plasticizer in order to increase the flexibility of the ink (col.4, lines 10-14, 21, and 44-45).

In light of the motivation for using dicyclohexyl phthalate plasticizer disclosed by Jaeger et al. as described above, it therefore would have been obvious to one of ordinary skill in the art

to use dicyclohexyl phthalate in Brown et al. or Suematsu et al. in order to produce ink with increased flexibility, and thereby arrive at the claimed invention.

15. Claims 1-2, 6-8, 12, 15-17, 20, 23-26, 31-32, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al. (U.S. 5,965,196).

Sawada et al. disclose hot melt ink possessing melting point of 50 °C or above wherein the ink comprises 5-60% ethylene-vinyl acetate copolymer and 20-80% wax including mixtures of vegetable wax, animal wax, i.e. spermaceti, polyethylene wax, and linear alcohol wax. From the examples, it is seen that the coating is prepared by heating to temperature of 110 °C (col.2, lines 38-45, col.3, lines 15-21 and 63-65, col.3, line 67-col.4, line 1, col.4, lines 6-7 and 17-19, and col.5, lines 2, 15-16, 25-26, and 65-66). Although there is no explicit disclosure of the viscosity, given that Sawada et al. disclose ink comprising same type and amounts of ingredients as presently claimed wherein the ink has melting point as presently claimed, it is clear that the ink would also intrinsically possess viscosity as presently claimed.

While Sawada et al. fails to exemplify the presently claimed composition nor can the claimed composition be “clearly envisaged” from Sawada et al. as required to meet the standard of anticipation (cf. MPEP 2131.03), nevertheless, in light of the overlap between the claimed composition and the composition disclosed by Sawada et al., it is urged that it would have been within the bounds of routine experimentation, as well as the skill level of one of ordinary skill in the art, to use composition which is both disclosed by Sawada et al. and encompassed within the scope of the present claims and thereby arrive at the claimed invention.

16. **NOTE:** While there is no disclosure in Sawada et al. that the hot melt ink is a flexographic printing coating composition as required in present claim 32, applicants attention is drawn to MPEP 2111.02 which states that “if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, then the preamble is not considered a limitation and is of no significance to claim construction”. Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner’s position that the preamble does not state any distinct definition of any of the claimed invention’s limitations and further that the purpose or intended use, i.e. flexographic printing coating composition, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art composition. Given that Sawada et al. disclose composition as presently claimed, it is clear that the composition of Sawada et al. would be capable of performing the recited purpose, i.e. flexographic printing coating composition, presently claimed as required in the above cited portion of the MPEP.

17. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al. as applied to claims 1-2, 6-8, 12, 15-17, 20, 23-26, 31-32, and 33-34 above, and further in view of Ouchi et al. (U.S. 6,106,602).

The difference between Sawada et al. and the present claimed invention is the requirement in the claims of solid linear alcohol.

Ouchi et al., which is drawn to hot melt ink, disclose the use of alcoholic wax possessing hydroxyl number of 20-150, viscosity of 5-30 mPas at 100-150 °C, molecular weight of 200-1500, and melting point of 50-120 °C in order to produce ink with good stability (col.2, lines 3-19 and 53-56 and col.3, line 59-col.4, line 31).

In light of the motivation for using solid linear alcohol disclosed by Ouchi et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such solid linear alcohol in the ink of Sawada et al. in order to produce ink with high optical transmission, hue, and chroma as well as good storage stability, and thereby arrive at the claimed invention.

18. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al. as applied to claims 1-2, 6-8, 12, 15-17, 20, 23-26, 31-32, and 33-34 above, and further in view of Kruse (U.S. 5,112,398).

The difference between Sawada et al. and the present claimed invention is the requirement in the claim of ethylene-vinyl acetate copolymer comprising 40% vinyl acetate.

Kruse, which is drawn to ink composition, disclose the use of ethylene-vinyl acetate comprising 40% vinyl acetate given that such copolymer adheres well to substrate (col.4, lines

48-52 and 63-66). Given that Kruse discloses ethylene-vinyl acetate comprising same amounts of ethylene and vinyl acetate as presently claimed, it is clear that such copolymer would also intrinsically possess melt index as presently claimed.

In light of the motivation for using specific type of ethylene-vinyl acetate disclosed by Kruse as described above, it therefore would have been obvious to one of ordinary skill in the art to use such ethylene-vinyl acetate in the ink of Sawada et al. in order to produce ink that adheres well to substrate, and thereby arrive at the claimed invention.

19. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al. as applied to claims 1-2, 6-8, 12, 15-17, 20, 23-26, 31-32, and 33-34 above, and further in view of Oliver et al. (U.S. 5,593,486).

The difference between Sawada et al. and the present claimed invention is the requirement in the claims of highly branched hydrocarbon wax.

Oliver et al., which is drawn to hot melt ink, disclose the use of highly branched hydrocarbon wax possessing number average molecular weight of 520 in order to produce ink with high optical transmission, hue, and chroma as well as to produce ink able to survive severe storage conditions without melting or offset (col.8, lines 25-27, col.8, line 67-col.9, line 2, and col.10, lines 43-47). Although there is no explicit disclosure regarding the softening point or viscosity of the highly branched hydrocarbon wax, given that Oliver et al. disclose the use of wax known under the tradename Vybar 253 which is identical to the highly branched hydrocarbon wax used in the present invention, it is clear that such wax would intrinsically possess softening point and viscosity as presently claimed.

In light of the motivation for using highly branched hydrocarbon wax disclosed by Oliver et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such wax in the ink of Sawada et al. in order to produce ink with high optical transmission, hue, and chroma as well as good storage stability, and thereby arrive at the claimed invention.

20. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al. as applied to claims 1-2, 6-8, 12, 15-17, 20, 23-26, 31-32, and 33-34 above, and further in view of in view of Oliver et al. (U.S. 5,593,486) and *Ethylene Homopolymers- Polywax*.

The difference between Sawada et al. and the present claimed invention is the requirement in the claims of specific type of polyethylene wax.

Oliver et al., which is drawn to hot melt ink, disclose the use of polyethylene wax possessing number average molecular weight of 1000 in order to produce ink with high optical transmission, hue, and chroma as well as to produce ink able survive severe storage conditions without melting or offset (col.8, lines 25-27, col.9, lines 34-48, and col.10, lines 43-47). Although there is no explicit disclosure regarding the molecular weight distribution or melting point of the wax, Oliver et al. disclose the use of wax known under the tradename Polywax, which is well known, as found in *Ethylene Homopolymers- Polywax* (retrieved from the Internet: <URL: [www.bakerhughes.com/bakerpetrolite /polymers/ethylene_homopolymers](http://www.bakerhughes.com/bakerpetrolite/polymers/ethylene_homopolymers)>), as possessing molecular weight distribution of approximately 1.1 and melting point of 80-132 °C.

In light of the motivation for using specific polyethylene wax disclosed by Oliver et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use

such wax in the ink of Sawada et al. in order to produce ink with high optical transmission, hue, and chroma as well as good storage stability, and thereby arrive at the claimed invention.

21. Claims 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al. as applied to claims 1-2, 6-8, 12, 15-17, 20, 23-26, 31-32, and 33-34 above, and further in view of Jaeger et al. (U.S. 4,889,560).

The difference between Sawada et al. and the present claimed invention is the requirement in the claim of plasticizer.

Jaeger et al., which is drawn to hot melt ink, disclose the use of up to 25% plasticizer such as dicyclohexyl phthalate plasticizer in order to increase the flexibility of the ink (col.4, lines 10-14, 21, and 44-45).

In light of the motivation for using dicyclohexyl phthalate plasticizer disclosed by Jaeger et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use dicyclohexyl phthalate in Sawada et al. in order to produce ink with increased flexibility, and thereby arrive at the claimed invention.

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

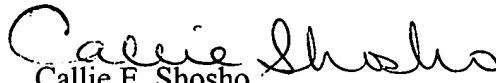
Stone et al. (U.S. 6,645,282) disclose hot melt ink comprising binder and wax, however, there is no disclosure or linear alcohol or viscosity as presently claimed.

Art Unit: 1714

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
7/9/06